CLAIMS

We Claim:

1. A transportable container having an internal environment isolated from ambient atmospheric conditions, comprising:

a sensor, monitoring a condition of said internal environment, and transmitting data related to said monitored condition; and,

a power supply, providing power to said sensor.

2. The transportable container of Claim 1, wherein said sensor continuously and non-invasively monitors said condition of said internal environment within said container.

3. The transportable container of Claim 1, wherein said data is transmitted using electromagnetic radiation.

4. The transportable container of Claim 3, wherein said electromagnetic radiation is in a frequency range of about 3 kHz to about 300 GHz.

5. The transportable container of Claim 1, wherein said sensor comprises a memory for storing said data related to said monitored condition.

6. The transportable container of Claim 1, further comprising:

an internal portion of said transportable container, wherein said sensor is mounted to the internal portion of said transportable container.

7. The transportable container of Claim 1, further including a second sensor, monitoring a condition of said internal environment within said transportable container, and transmitting data related to said monitored condition.

8. The transportable container of Claim 1, wherein said sensor includes a plurality of sensor inputs positioned at respective distinct locations within said transportable container, each said sensor input monitoring said condition of said internal environment at said respective distinct locations within said container.

9. The transportable container of Claim 1, further including:

a transceiver in communication with said sensor, receiving and transmitting said data transmitted by said sensor.

10. The transportable container of Claim 9, wherein said transceiver is connected with said transportable container, and wherein said data is transmitted over a network bus.

11. The transportable container of Claim 9, wherein said data is transmitted between said sensor and said transceiver using electromagnetic radiation.

12. The transportable container of Claim 11, wherein said electromagnetic radiation is in a frequency range of about 3 kHz to about 300 GHz.

13. A transportable container monitoring system for monitoring an internal environmental condition of a transportable container having an internal environment isolated from ambient atmospheric conditions, the transportable container monitoring system comprising:

a sensor, monitoring said internal environmental condition, and transmitting data representative of said monitored internal environmental condition; and,

a transceiver in communication with said sensor, receiving and transmitting said transmitted data.

14. The transportable container monitoring system of Claim 13, wherein said transportable container is positioned on a processing tool, and wherein said transceiver is operatively connected with said processing tool.

15. The transportable container monitoring system of Claim 14, wherein said transceiver provides said data to said processing tool, and said processing tool deactivates if said data is not within a desired operating range.

16. The transportable container monitoring system of Claim 13, further including:

a second transceiver, at a location external to said transportable container, for receiving and transmitting said data transmitted by said transceiver.

17. The transportable container monitoring system of Claim 16, further including:

a host computer receiving and processing said data transmitted from said second transceiver.

18. The transportable container monitoring system of Claim 17, wherein said host computer is at a remote location relative to said transportable container.

19. The transportable container monitoring system of Claim 17, wherein said host computer determines if said monitored internal environmental condition within said transportable container is within a desired operating range.

20. The transportable container monitoring system of Claim 19, wherein said container is positioned on a processing tool, and wherein said host computer deactivates said processing tool if said internal environmental condition is not within said desired operating range.

21. A transportable container having an internal environment isolated from ambient atmospheric conditions, comprising:

a plurality of sensors, each sensor monitoring an internal environmental condition within said transportable container;

a transceiver in communication with said plurality of sensors, receiving and transmitting said data transmitted by said plurality of sensors; and,

a power supply, providing power to said at least one sensor and said transceiver.

22. The transportable container of Claim 21, wherein at least one of said sensors in said plurality of sensors is selected from a group comprising:

a temperature sensor;

a humidity sensor; and

an accelerometer sensor.

23. The transportable container of Claim 21, wherein at least one of said plurality of sensors includes a plurality of sensor inputs, mounted with said internal portion of said container at distinct locations, sensing an internal environmental condition within said container at said respective distinct locations.

24. The transportable container of Claim 21, wherein said communication between said plurality of sensors and said transceiver is performed over a network bus.

25. A transportable container sensor network, for monitoring internal environmental conditions within a transportable container, comprising:

a network bus;

a transceiver, connected with said network bus;

a plurality of network nodes, connected with said network bus; and,

a plurality of sensors, connected with said network nodes, wherein said sensors monitor said internal environment conditions within said transportable container, and provide data to said network nodes related to said internal environment conditions.

26. The transportable container sensor network of Claim 25, wherein said plurality of network nodes are configured as a master-slave network, and wherein said network bus functions as a gateway.

27. The transportable container sensor network of Claim 25, wherein said plurality of network nodes are configured as a pier-to-pier network.

28. A method for monitoring an internal environmental condition within a transportable container having an internal environment isolated from ambient atmospheric conditions, comprising the steps of:

monitoring with a sensor, said internal environmental condition within said transportable container;

generating data related to said monitored condition; and,

transmitting said data.

29. The method of Claim 28, further including the steps of:

receiving said data at a location external to said transportable container; and,

processing said data to determine if said internal environmental condition is within a desired operating range.

30. The method of Claim 28, wherein said step of monitoring includes monitoring a plurality of internal environmental conditions with a plurality of sensors.

31. The method of Claim 28, wherein said data is transmitted using electromagnetic radiation.

32. The method of Claim 31, wherein said electromagnetic radiation is in a frequence range between about 3 kHz to about 300 Ghz.

33. The method of Claim 28, further including the steps of:

determining whether said internal environmental condition is within a desired operating range; and,

alerting an operator if it is determined that said internal environmental condition is not within a desired operating range.

34. The method of Claim 33, wherein said step of determining whether said internal environmental condition is within a desired operating range includes the step of:

processing said data related to said internal environmental condition.